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ABSTRACT

This paper presents an illustrated tripartite model of communication according to which memory encompasses three overlapping subsets, the cognitive functions of experiencing, thinking, and expressing. It contends that thinking may be an integral part of the selection and experience of stimuli as well as of creating new expressions. No assumption is made about the existence or nonexistence of awareness, although awareness is not excluded from operating as a special set of cognitive rules. The model, inspired by Cushman and Whiting's 1971 San Francisco convention paper, (1) clarifies several lexical and conceptual questions, (2) provides a method for comparing other models and research findings, (3) helps in efforts to comprehend subjective experiencing, and (4) dissolves the boundary between cognition and communication. (TS)

A Cognitive Model of Communication

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A Cognitive Model of Communication

Cognitive style, if shared, contributes to good communication.[1] Therefore, a model of the cognitive stystem is useful for communication study. The present paper offers a simple model of the cognitive system. Too many models are merely constructions based on logical or cybernetic knowledge. Harry Singer's model of oral language and reading[2] and Edward Mysak's model of speech are such models. They also defy adoption by being overly complex. Such models are flawed at a basic level. They do not correspond to known physiological parts and mechanisms. They implicitly maintain the mind-body division which was formally laid to rest by Von Bertalanffy but which still implicitly exists in most cognitive models. And, finally, such models should be but are not represented as special cognitive activities, as elaborations of a more general and inclusive cognitive model. They are, therfore, not comparable and merely disturb the too-slight move toward conceptual unity in academia.

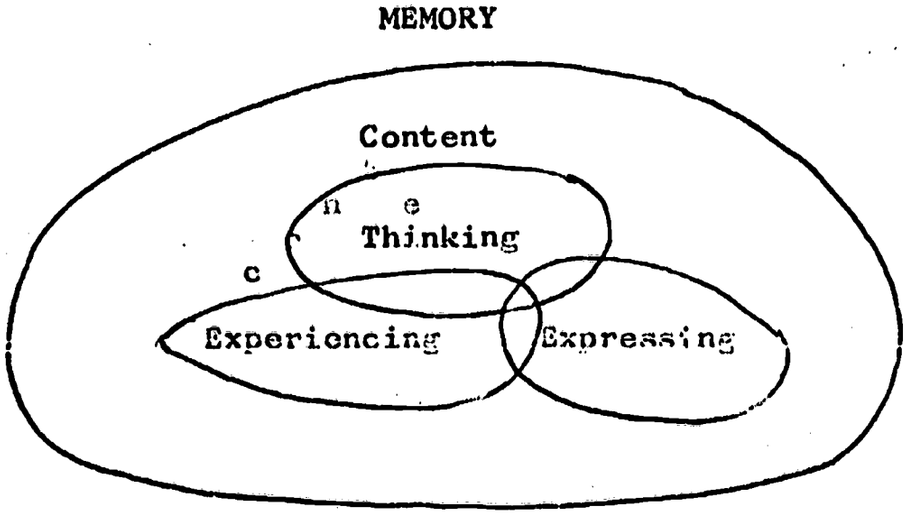
The above global and outspoken criticisms of complexity, mind-body separation, and non-comparability motivated the creation of a model which was simple, included both mind and body, and would facilitate comparisons between cognitive models of all sorts.

Our model derives from sojourns into psychology and communication. The basic inspiration for this model came from Cushman and Whiting's 1971 ICA San Francisco convention paper since printed in The Journal of Communication.[4] Cushman and Whiting, following the lead of the legal profession, anthropology, and linguistics,[5] to name only a few of their predecessors, advised the communication field to seek the rules underlying communicating. Their model--i.e. a collection of information processing rules--was, however, not enough of a model given the cognitive complexities found in psychological models.

Tripartite models predominate in a scan of the cognitive

literature. For largely semantic reasons, e.g. What is "input" as a process? What is"Thinking?" etc., those models are unsatisfactory. The linear arrangement of the parts, as will be shown below, is added reason for the limited usefulness of tripartite cognitive models.

Set theory contributed the Venn diagram (the diagram was explained to me by Therese DiGrazia, a 12 year old) for the visual character of the present model. The communication rules approach, tripartite models of cognition, and the Venn diagram were combined into a model of the cognitive system.



The major circle or set is Memory. Three overlapping subsets or subcircles represent the overlapping cognitive functions Experiencing, Thinking, and Expressing. Each subset represents a group of rules for processing information, namely for experiencing, thinking, and expressing. These terms were chosen for their usefulness in the growing study of subjective experiencing. Generally, "input" is replaced by "experiencing" and "output" is replaced by "expressing." The change from static to active words is considered a step in the right direction.

Serving and common to each subset is content, the "stuff" used by the individual who is applying the rules which make up the cognitive system. The rules often require visual or auditory memory content--in other words, rules sometimes operate on remembered content. But, importantly, <u>both</u> rules and content are part of Memory.

Virtually all tripartite cognitive models represent the three basic functions linearly. The general sequence, with lexical variation, is input-processing-output. For example, M. T. Singer and L. C. Wynne, my former employers, use a tripartite cognitive structure of perceiving, thinking, and communicating.in their work on schizophrenic ccommunicating.[6]

Our non-linear arrangement reflects the fact that thinking--by which we mean the creative manipulation of symbols--does not always occur in communicating. For example, social maintenance rules are experienced and responded to automatically and consistently with little variation from the ritual. Automatic, habitual response and expression is the commonly followed rule; thinking is the exception.

Another unique feature of the present model is the overlap of the three parts. Overlapping is realistic in that we are not physiologically "boxed up" inside of our bodies into units that correspond to the parts of the cognitive model. Our parts, note, are <u>functions</u>, not "integrator units" or "transmission storage" etc. Again the activity is more important than the static structure.

Overlap of thinking with experiencing and expressing, in part, means that thinking may be an integral part of the selecting and experiencing of stimuli just as thinking can play a role in creating new expressions. The circles also overlap because in many cases the rules followed are the same in the different subsets. An example is grammar and syntax rules, which are rituals of a sort, hence, are the same in both experiencing and expressing. Marshall McLuhan advances the thesis that the experiencing rules that media force us to follow and learn determine the style of or the rules for thinking and expressing.[7] The extent of rules overlap cannot be estimated yet and likely varies from situation to situation and from individual to individual.

Models of cognitive style usually include some overt or implicit assumption that cognitive style is learned and that the body is a separate, neutral, and empty host for the style. Rather the body is the limiting factor of stylistic variation. We must include in the theory of cognitive style

the biological limiters and determiners of cognitive style. An example of this perspective comes to us from McLuhan and is supported by other sources. Hearing and seeing, McLuhan argues, are two specific media through which data is processed. Like all media, hearing and seeing carry implicit assumptions about the nature of space. In vision we conceive of things in front of us whereas in audition we conceive as though we were in the center of the conception. Perspective is possible in vision but difficult at best in audition.[8] Averaged evoked responses[9] and cosmic or biological clocks[10] are two research areas that are easily related to such a perspective. Physiological-educational psychologists such as Piaget have shown that many new cognitive processing rules, known generally as skills, can be learned only when the body has sufficiently developed. At 18 months the baby will be talking a bit, comparative reasoning occurs several years later, and so on. In short, cognitive styles are greatly determined by physiological processing rules. The extent of the delimiting cannot be assessed until physiology is an accepted part of cognitive communication theory and research.

The unification of learned and physiologically developed processing rules reflects a non-dualist approach to the cognitive system (mind) and the body. To make a complex problem simple, our model includes both learned and physiologically developed information processing rules. The only problem with this unification is that the term "Memory" usually refers to only learned information. Memory here takes on the added denotation of physiological or evolutionary memory. This non-dualist approach challenges the communicologist to expand his understanding to include physiology. And it challenges the psychologist to stop considering "cognitive" to mean "mind" as separate from body. They are one.

Another unique feature of the present model is that no assumption is made about the existence or non-existence of awareness in the cognitive functions of experiencing, thinking, and expressing. Awareness need not be present for the cognitive rules to operate. In fact, cognitive rules operate mostly with no awareness--even if the person is a psychologist or communicologist. In particular, thinking is not necessarily

an event that occurs with awareness. Thinking is not awareness; and awareness does not guarantee that thinking is occurring. Intuitive flashes indicate that non-aware thinking is occurring and sometimes becomes the object of awareness. Neither is awareness necessarily a part of experiencing or expressing.

Although not implied in the model, awareness is not excluded from operating as a special set of cognitive rules shared by all three cognitive activities, experiencing, thinking, and expressing. The set of rules for the activity called awareness can be an aid in the acquisition of new cognitive rules and/or in the alteration of existing rules. Once learned or altered the rules are commonly dropped from awareness and become automatically operative. Although awareness may aid learning, it is not a necessary process or condition. Edward T. Hall points out in The Silent Language that many ways of behaving, hence the rules underlying them, are learned without any awareness of either their being taught or their being learned.[11]

Awareness is not only not necessary for learning to occur, it is often an impediment to learning and cognitive functioning in general. Here we border on an old argument between Eastern philosophers and Western scientists over what awareness is good for, what it is for, and whether or not it can be an aid to peaceful living. That argument cannot, because of its complexity, be discussed here. It is raised only to point out that awareness is not clearly desirable.

When considering awareness, the term "consciousness" commonly occurs to confuse us. "Consciousness" is defined differently here than it usually is in Western social sciences where its use is most inconsistent and vague at best. Consciousness does not denote or connote awareness. Rather, as in much but not all Eastern philosophy, consciousness is the realm or rules and content through which awareness may flow.[12]

The popular term "consciousness expansion" is comparable in some ways to learning. The difference is that the material

in consciousness must be available to awareness. By learning occurs with or without awareness. Generally, we have learned more than is included in consciousness, more than we are able to immediately bring to awareness. The challenge is to become aware of all we have learned, to expand our consciousness until it is as large as our hidden and unhidden knowledge and body functioning rules. Know thyself is written on the temple at Delphi.

The cognitive communicologist is not interested in all cognitive rules. He is primarily interested in communication rules; he tries to expand his consciousness, to bring communication rules to awareness. The hope driving his effort is that awareness of communication rules will make it easier to eliminate communication rules which are inappropriate to the goal of good communication and to use those that lead to good communication. When rules are unknown and automatic, good communication is relatively rare just as forming a useful chemical substance is difficult if one does not know and apply the rules of basic chemistry. Awareness gives one a choice of rules to apply or not.

Carroll quigley says we should develop "cognitive sophistication" to become good communicators. Cognitive sophistication is the ability to figure out and know simultaneously one's own and another's cognitive style and to translate from one to the other. Good communication requires cognitive sophistication.[13]

The present model is an aid to the rules-discovering communicologist. One way it helps is by increasing model comparability. Most models are of the sort "first this, then, that, after which such and such occurs, etc." Such a temporal sequence is essentially a set of rules. The rules give the processing sequence and functions. All cognitive and communication models we have looked at can be reduced to a set of rules and, in some cases, to subsets of rules which then can assume the form of the present model. The field of rhetoric traditionally explores thinking-expressing rules. And audience analysis is a move to comprehend the rules underlying experiencing.

The present model is also useful for representing research findings in a unified way. "This is what happens when. . ." infers one or more cognitive rules. Most research findings may be compared by restating the findings as rules and simply comparing them. Hypothesis stating and testing generally follows this comparison.

This model clarifies several lexical and conceptual questions; provides a method for comparing other models and research findings; is simple and easily adoptable; and has proven useful in efforts to comprehend subjective experiencing--the Science of Experiencing being the potent next step now being taken in the social sciences.[14] Most importantly, this model dissolves the boundry between cognition and communication.

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